SB761
U7I5
88-7

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

FOREST PEST MANAGEMENT

STATE & PRIVATE FORESTRY

INTERMOUNTAIN REGION

3420
Report No. 88-7
May 1988

POST-CONTROL EVALUATION OF DWARF MISTLETOE, KELLY GUARD STATION AREA, KEMMERER RANGER DISTRICT, BRIDGER-TETON NATIONAL FOREST

by
Ann M. Keysor
Biological Technician

INTRODUCTION

A lodgepole pine dwarf mistletoe (DM) control project was evaluated on the Kemmerer Ranger District north of the Kelly Guard Station on October 5 and 6, 1987. Units 1, 2, and 6A on the West Fork Timber Sale and units 5, 6, 12, 21, 22, and 24 on the Big Park I Timber Sale were treated in 1986 following recommendations by LaGrand Hobbs in the Biological Evaluation #R4-85-2. The direct control treatment involved cutting down or girdling DM infected lodgepole pine (LPP) within 30 feet from the regeneration/clear-cut unit. This treatment was only recommended in areas where less than half of the trees were LPP. This leaves a 30 foot barrier of non-host species (fir, spruce, aspen, Douglas-fir, or limber pine) to block DM seeds from infecting the regeneration.

OBJECTIVES

The objectives of this evaluation are to inspect the treatment procedures and/or provide changes to the treatment strategies for minimizing infection of lodgepole pine regeneration (LPP) (Pinus contorta) by dwarf mistletoe (DM) (Arceuthobium americanum).

METHODS

The perimeter of each unit was inspected to determine if all infected LPP had been cut down or girdled as specified in the Biological Evaluation #R4-85-2. The location of LPP trees either not treated or not killed by the treatment were mapped.

LIBRARY COPY
ROCKY MTN. FOREST & RANGE
EXPERIMENT STATION

RESULTS AND RECOMMENDATIONS

All of the units surveyed contained LPP trees not killed by girdling, and 7 units had untreated DM infected LPP trees within 30 feet of the regeneration. The approximate location of the live girdled trees are represented by dots and untreated trees by x's in figures 1 and 2. The girdled trees that are green and standing still have the potential to spread DM seeds into the regeneration. These girdled trees should be checked to ensure that they have died from the treatment.

The following results and recommendations are by unit:

Unit 1: Two LPP trees on the north side need treatment. The south side of the clear-cut unit is next to a natural grass clearing which should have been incorporated into the 30 foot buffer, instead LPP were treated beyond the clearing.

Unit 2: Six LPP trees on the West side need treatment. Three of these trees are 3" DBH but are infected.

Unit 6A: Three 3" DBH trees on the south side, one 1" DBH tree on the southeast side, and three 5-6" DBH LPP trees on the north side need treatment. The LPP trees treated on the southwest corner were removed with a skidder which damaged any non-host trees available for use as the buffer against DM seeds. This type of treatment creates an extension of the clearcut boundary. The damage was only along 3 to 4 chains of the boundary and not critical but caution should be used when using equipment in the buffer areas. It would be more effective to damage the regeneration within the clear-cut than to damage the non-host buffer trees.

Unit 5: Two subalpine fir trees were girdled along the west edge. These trees are part of the non-host buffer trees and need to be kept alive.

Unit 6: One LPP tree has been girdled but was still green.

Unit 12: Two LPP trees need treatment, one on the north and one on the east edge of the unit.

Unit 21: One 6" DBH tree on the west side and two 12" DBH LPP trees on the east side of the unit need treatment.

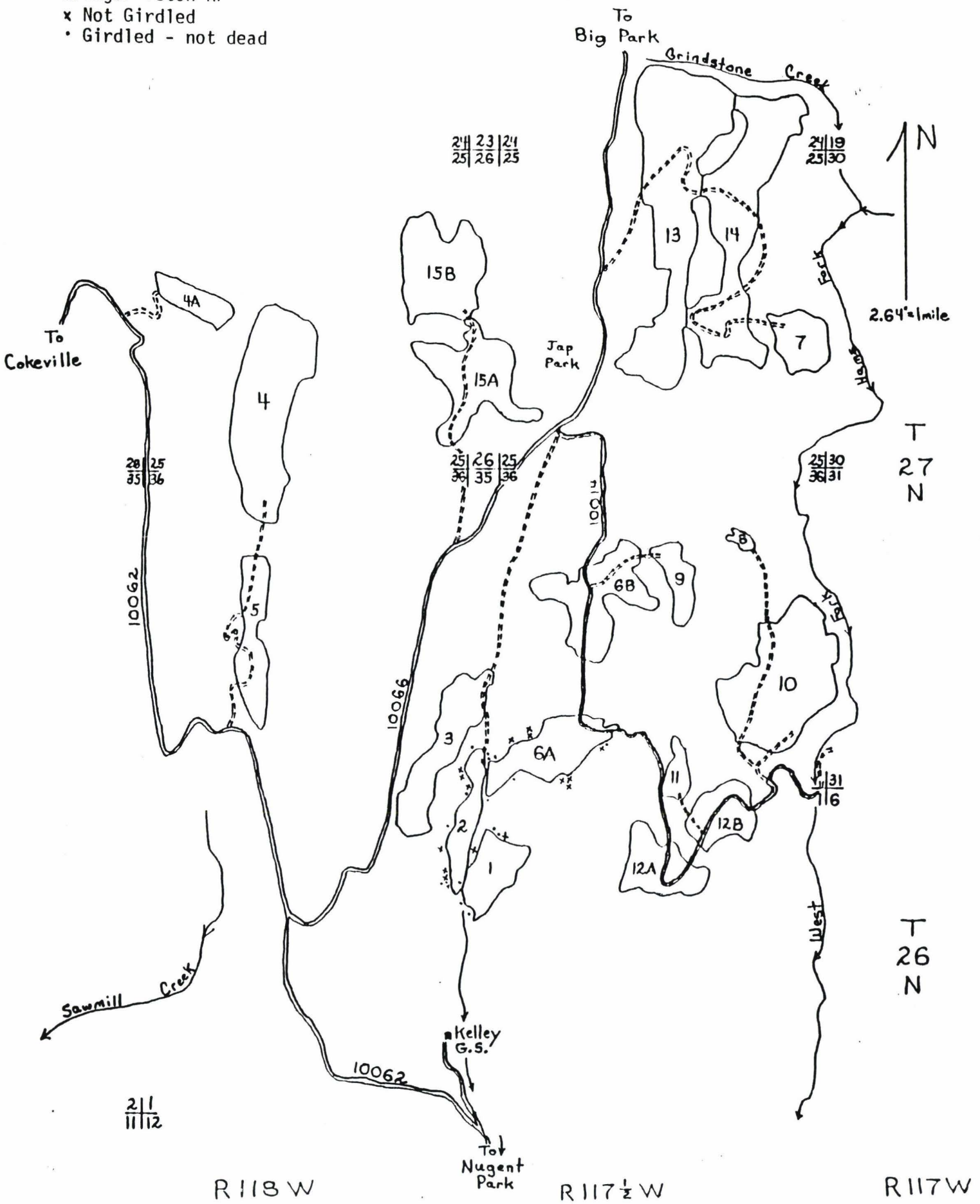
Unit 22: Two infected LPP trees (5" and 8" DBH) are in the center of the unit and need to be treated along with any other infected residuals that were left when this unit was cut. The spread of DM seeds will be slower because of the large amount of non-host species in this unit.

Unit 24: Two 6" DBH LPP trees at both the northwest and southeast corners need treatment. There was evidence of Ips beetle attacking the treated LPP trees. This should not be a problem but the surrounding untreated LPP trees should be monitored for future attacks.

ACKNOWLEDGEMENT

Appreciation is extended to Tony Ramirez for assistance in field work.

R4-88-7 FIGURE 1.
Dwarf mistletoe control project
Kemmerer RD
Bridger-Teton NF
x Not Girdled
• Girdled - not dead



R4-88-7 FIGURE 2.
Dwarf mistletoe control project
Kemmerer RD
Bridger-Teton NF
× Not Girdled
• Girdled - not dead

BIG PARK I TIMBER SALE